

REMARKS

Claims 1-38 are currently pending in the application. By this amendment, claims 1-34 are amended and claims 35-38 are added for the Examiner's consideration. The above amendments do not add new matter to the application and are fully supported by the specification and the claims, as originally filed. The amendments to the claims delete reference numerals and make the claims better comport with U.S. Patent Practice. Reconsideration of the rejected claims in view of the above amendments and the following remarks is respectfully requested.

35 U.S.C. §112, 2nd Paragraph Rejection

Claims 10, 20-26, 28, 29 and 34 were rejected under 35 U.S.C. §112, 2nd paragraph. Claims 10, 20, 28 and 34 are amended to address the Examiner's concerns. The features deleted from claims 10, 20, 28 and 34 to address this rejection are provided in new claims 35-38, respectively. Applicants request withdrawal of the 35 U.S.C. §112, 2nd paragraph, rejection.

35 U.S.C. §103 Rejection

Claims 1-34 were rejected under 35 U.S.C. §103(a) for being unpatentable over U. S. Patent No. 4,685,623 to Clark in view of U. S. Patent No. 5,935,386 to Somervuori or U. S. Patent No. 4,309,246 to Hulit et al. This rejection is respectfully traversed.

The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness. To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.¹ Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach

¹ While the *KSR* court rejected a rigid application of the teaching, suggestion, or motivation ("TSM") test in an obviousness inquiry, the [Supreme] Court acknowledged the importance of identifying "a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does" in an obviousness determination. *Takeda Chemical Industries, Ltd. v. Alphapharm Pty., Ltd.*, 492 F.3d 1350, 1356-1357 (Fed. Cir. 2007) (quoting *KSR International Co. v. Teleflex Inc.*, --- U.S. ----, 127 S.Ct. 1727, 1731 (2007)).

or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP §2142. Applicants submit that no proper combination of the applied art teaches or suggests each and every feature of the claimed invention.

The present invention is directed to a method of grinding water suspended paper fibers or cellulose fibers. In particular, claim 1 recites:

A method for refining paper fibers or cellulose fibers in aqueous suspension in which the fiber stock is guided through at least one refining zone lying between refining surfaces, in which the refining surfaces lie on refiner tools pressed against one another, whereby mechanical refining action is transferred to the fibers such that strengths of the paper produced therefrom are changed, whereby the refining surfaces are moved relative to one another such that, at a point at which two of the refining surfaces are closest in the refining zone, a relative speed between the fiber stock and the refining surfaces, seen in a main direction of movement of the refining surfaces, is no more than 10% of an absolute speed of the refining surface moved quickest, wherein at least one of the refining surfaces interacting in the refining zone is porous.

The Applied References do not Show All Features

Applicants submit that all of the features of the claimed invention are not shown or suggested by the applied references. More specifically, none of the references show or suggest the relative speed between the fiber stock and the refining surfaces, seen in the main direction of movement of the refining surfaces, is no more than 10% of the absolute speed of the refining surface moved quickest. Simply, none of the references refer to a relative speed of the fiber stock and the refining surfaces with relation to an absolute speed of the refining surface. For example, Clark only discloses at col. 1, lines 16-22 the relative speed of the bars is from 3,000 to 6,000 feet per minute. Somervuori and Hulit do not even disclose any specific speeds for the refining surfaces, much less that of the fiber stock and the refining surfaces.

No Motivation to Combine References

Applicants submit that there is no motivation to combine the references as suggested by the Examiner. For example, Clark is used to treat pulp during the beating or refining stage; whereas Somervuori and Hulit show paper treatment at a different stage of treatment and for different purposes. In comparison, Somervuori shows a suction box for dewatering pulp, which may be performed in the head section or the press section. Somervuori makes no mention of using such a suction box in the refining section. Hulit, on the other hand, shows the dewatering of paper used for sanitary products, which needs to be soft and have a certain type of imprint. The process described in Hulit shows felt web used to dewater the paper during a compression stage. That is, in Hulit, a first compression nip is formed between an imprinting fabric and a felt web. Although the felt web (and a vacuum) are used to dewater the web, as noted in the Abstract the web in Hulit remains essentially undisturbed on the imprinting fabric as it is transported through the first nip. This is opposite to the claimed invention, which requires a mechanical refining action transferred to the fibers such that the strengths of the paper produced therefrom are changed.

In addition, MPEP 2143.01 clearly states:

The mere fact that references can be combined or modified does not render the resultant combination obvious unless **>the results would have been predictable to one of ordinary skill in the art. *KSR International Co. v. Teleflex Inc.*, 550 U.S. ___, ___, 82 USPQ2d 1385, 1396 (2007)(".... For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.").

Applicants submit that the results of the present invention are not predictable. For example, current technology is directed to knife refiners with high relative speed between the refiner tools, which lead to cutting and/or shearing stress on the fibers. It was not known on an industrial scale to use a slower speed such that for refining paper fibers or cellulose fibers in aqueous suspension in which mechanical refining action is transferred to the fibers such that the strengths of the paper are changed.

In addition, MPEP 2143.01 clearly states:

A statement that modifications of the prior art to meet the claimed invention would have been "well within the ordinary skill of the art at the time the claimed invention was made" because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993). **">[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *KSR*, 550 U.S. at ___, 82 USPQ2d at 1396 quoting *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006).<

In the present rejection, though, the Examiner has provided a mere conclusion that the references can be combined to result in the claimed invention. The Examiner has failed to provide any rational underpinning to support the legal conclusion of obviousness. Also, Applicants submit that there is no objective evidence to support a teaching to combine the references. As argued above, none of the references even teach to strengthen the paper fibers by use of compression. Specifically, Clark is related to treating pulp fibers, whereas, Somervuori shows a suction box for dewatering pulp and Hulit shows the dewatering of paper used for sanitary products.

Impermissible Hindsight Reasoning

Applicants submit that the Examiner is using impermissible hindsight reasoning in making this rejection. More specifically, Applicants submit that the Examiner has used Applicants' specification as a "road map" for selecting and combining the applied references. It is impermissible to use the claimed invention or Applicants specification as an instruction manual or template to piece together the teachings of the prior art so that the claimed invention is rendered obvious. That is, one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. However, Applicants submit that this is what the Examiner is appearing to do in the present rejection. This is based on the fact that there is no motivation or suggestion in any of the applied references to combine such references to achieve the claimed invention.

Dependent Claims

Claims 2-34 are dependent claims, depending from a distinguishable base claim. For this reason, Applicants submit that claims 2-34 are also distinguishable by virtue of their dependencies on base claim 1. Applicants also submit that many of the features of claims 2-34 are allowable based on their own merits.

For example, none of the references even show that both refining surfaces interacting in a refining zone are porous (claim 2). At best, Hulit shows only a single dewatering felt 20. Somervuori only shows a single perforated jacket used in the suction box. These references also do not show the features of the following claims:

Claim 4: the material layer is composed of sintered material;

Claim 5: the material layer is composed mainly of chromium steel;

Claim 6: the material layer is composed mainly of hard metal;

Claim 7: the material layer is composed mainly of a copper alloy;

Claim 8: the material layer is composed mainly of ceramic;

Claim 9: the material layer is composed mainly of plastic; or

Claim 17: both refining surfaces are provided with refiner bars running crosswise.

Applicants also submit that the features of claims 2-34 are more than mere obvious design choices. For example, the material layers, the speed of the refining surfaces and the use of two refining surfaces interacting in the refining zone being of a porous material, as well as the use of gaps (tooth gaps) are features providing benefits to the claimed invention, as discussed in the specification.

Accordingly, Applicants respectfully request that the rejection over claims 1-34 be withdrawn.

New Claims

Claims 35-38 are added for the Examiner's consideration. Applicants submit that these claims are distinguishable over the applied art for the reasons discussed above.

Other Matters

Applicants submit that the rejection of claims 1-34 under §103 is improper because the Examiner has failed to establish a *prima facie* case of obviousness. Instead, the Examiner merely asserts the disclosure of various claimed features, and concludes that the claimed invention would have been obvious. However, the Examiner fails to identify any reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. This type of rejection is clearly improper since the Supreme Court has held that “rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. ___ (2007), quoting *In re Kahn*, 441 F. 3d 977, 988 (CA Fed. 2006). Therefore, the rejection is improper and should be withdrawn.

Applicants note that the Examiner did not properly reject claims 1-34 under 35 U.S.C. § 103(a). That is, Applicants submit that the Examiner did not consider all the words in the claims in judging the patentability of that claim against the prior art. See, for example, MPEP 2143.03. For this reason, Applicants submit that a clear issue was not developed between the Examiner and Applicants. As such, the next Office Action, which should clarify this issue, *cannot* be made final.

According to MPEP 706,

Before final rejection is in order a clear issue should be developed between the examiner and applicant. To bring the prosecution to as speedy conclusion as possible and at the same time to deal justly by both the applicant and the public, the invention as disclosed and claimed should be thoroughly searched in the first action and the references fully applied; and in reply to this action the applicant should amend with a view to avoiding all the grounds of rejection and objection.

Additionally, MPEP 706.07(a) notes:

Under present practice, second or any subsequent actions on the merits shall be final, except where the examiner introduces a new ground of rejection that is neither necessitated by applicant's amendment of the claims nor based on information submitted in an information disclosure statement filed during the period set forth in 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p). ...

Furthermore, a second or any subsequent action on the merits in any application ... will not be made final if it includes a rejection, on newly cited art, other than information submitted in an information disclosure statement filed under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17 (p), of any claim not amended by applicant or patent owner in spite of the fact that other claims may have been amended to require newly cited art.


Accordingly, Applicants respectfully submit that the Examiner may not make the next action final, as in the previous Office Action a "clear issue [was not] developed between the examiner and applicant".

CONCLUSION

In view of the foregoing amendments and remarks, Applicants submit that all of the claims are patentably distinct from the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue. The Examiner is invited to contact the undersigned at the telephone number listed below, if needed. Applicant hereby makes a written conditional petition for extension of time, if required. Please charge any deficiencies in fees and credit any overpayment of fees to Attorney's Deposit Account No. 19-0089.

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